UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,818	03/26/2004	Gary A. Carr	740883-187	7834

22204 7590 12/13/2005

NIXON PEABODY, LLP
401 9TH STREET, NW
SUITE 900
WASHINGTON, DC 20004-2128

EXAMINER	
KAYES, SEAN PHILLIP	

ART UNIT	PAPER NUMBER
2841	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/809,818	CARR ET AL.	
	Examiner	Art Unit	
	Sean Kayes	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 19-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16-18* is/are allowed.

6)☒ Claim(s) *1-15 and 19-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "2" has been used to designate both axle and holes. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "3" has been used to designate both wheel and load bearing section. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "5" has been used to designate both axle and rail. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 3, load bearing section. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be

notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 5 fig 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

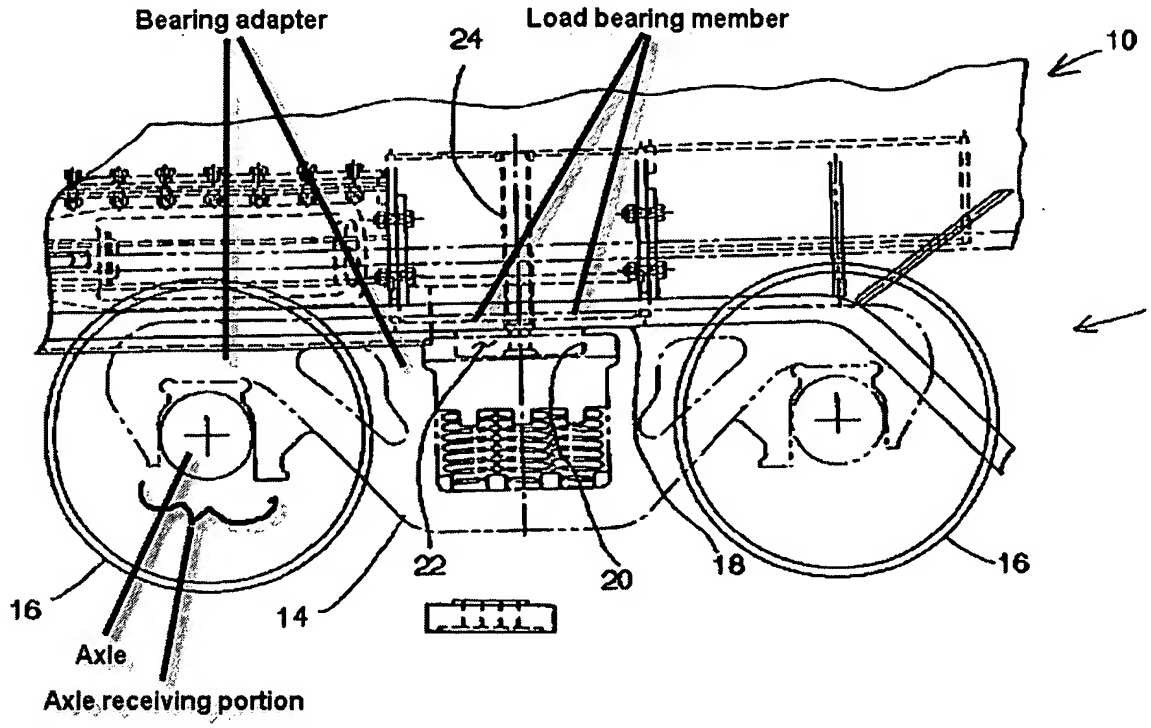
6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-6, 8-9, 11, and 19-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Stimpson (US 6441324.)

8. With respect to claim 1 Stimpson discloses A vertical load measurement device for measuring a load at least partially supported by an axle of a railcar comprising: a bearing adapter sized to be mounted between a load bearing member of the railcar and an axle bearing housing of the railcar (see picture I. below); at least one beam member having a first end and a second end (see picture II. below), at least one of said first end and second end being secured to said bearing adapter (the ends are secured by the of the weight loaded on the beam, column 2 lines 25-26), and a midsection extending between said first end and said second end which supports the load applied by the load bearing member of the railcar, said midsection being vertically spaced from said bearing adapter to allow deflection of said at least one beam member in response to the load applied by the load bearing member (column 4 lines 46-49); and a sensor secured to said beam member which measures said deflection of said beam member (see picture II. below.)

I.


Bearing adapter
24
Load bearing member
10
16
Axle
Axle receiving portion
14
22
20
18
16

II.

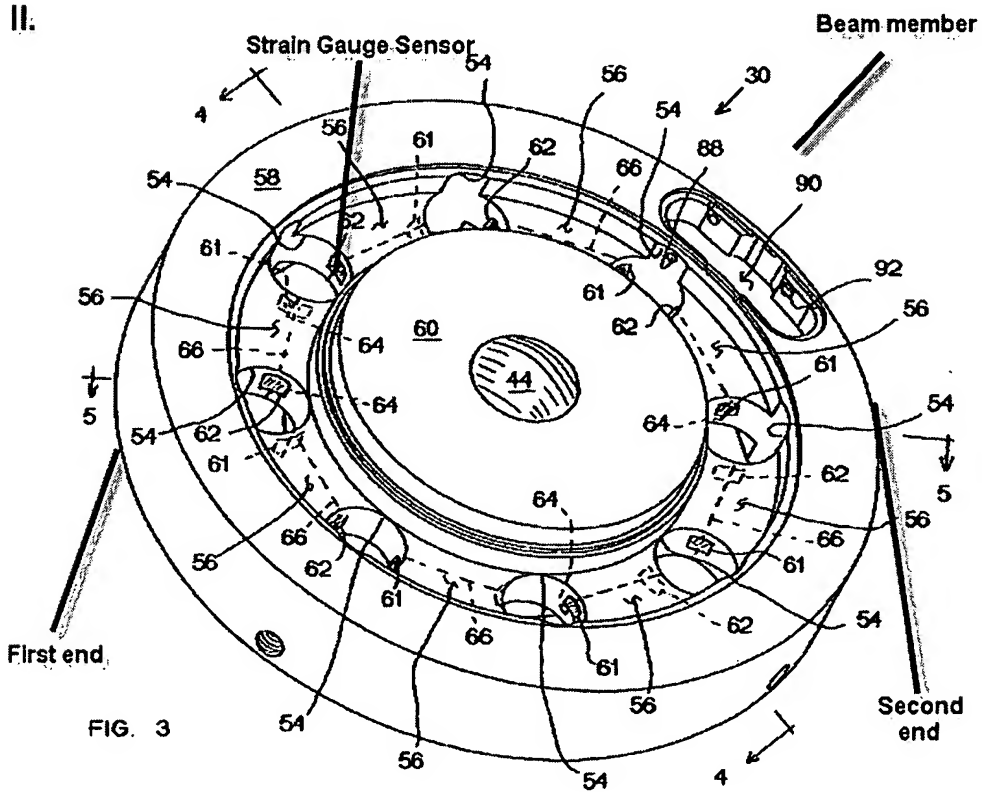
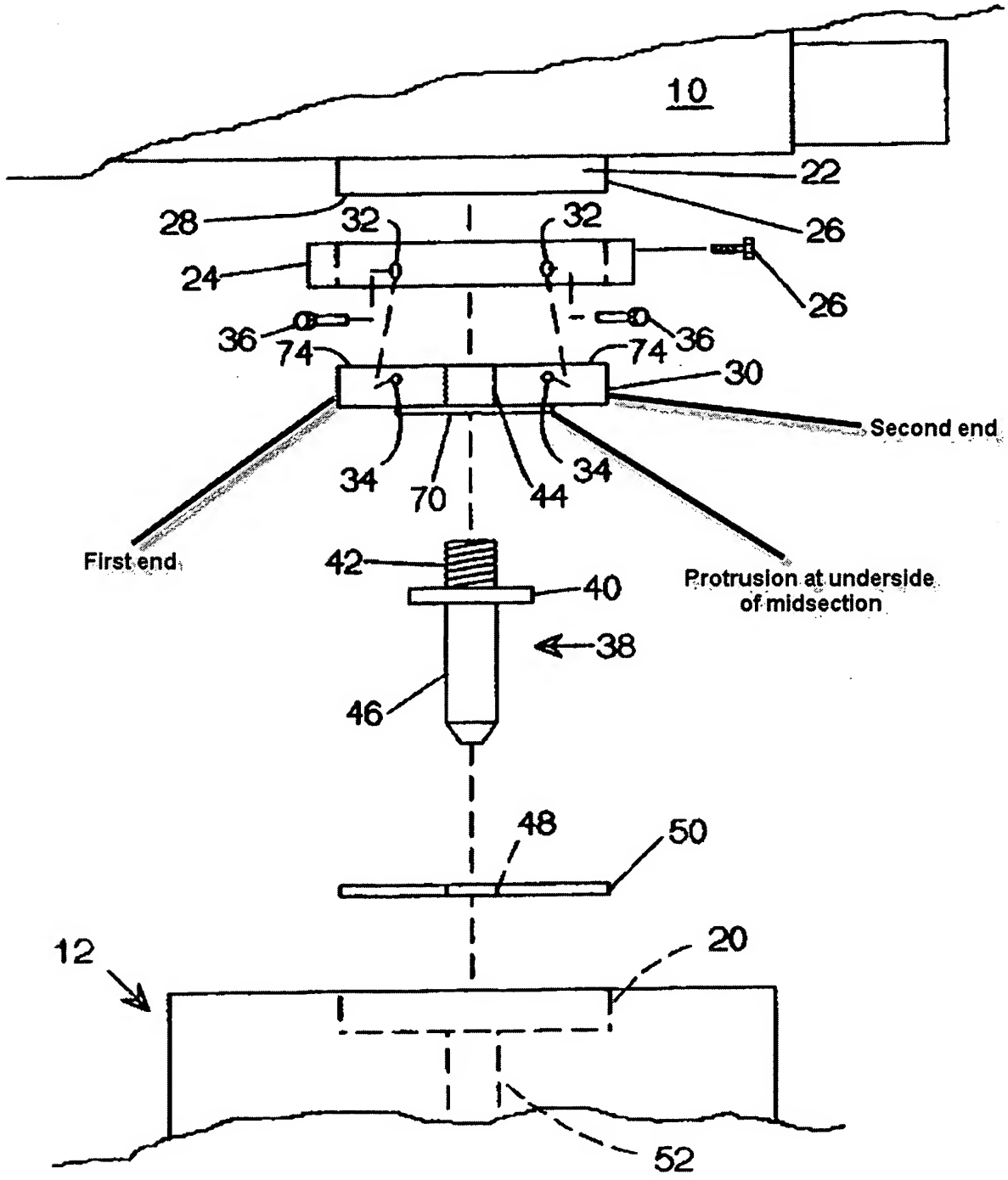

Strain Gauge Sensor
Beam member
First end
Second end
4
5
30
44
58
60
88
90
92

FIG. 3

III


10
22
28
32
32
26
24
26
36
74
74
36
30
Second end
34
70
44
34
First end
42
40
Protrusion at underside of midsection
38
46
48
50
12
20
52

9. With respect to claim 2 Stimpson discloses a measurement device of claim 1 (see 102 rejection above,) wherein said bearing adapter includes an axle receiving portion (see picture I. above.)

10. With respect to claim 3 Stimpson discloses a measurement device of claim 2 (see 102 rejection above,) wherein said axle receiving portion is substantially semicircular in shape (see picture I, axle receiving portion of bearing adapter is substantially semi-circular.)

11. With respect to claim 4 Stimpson discloses a measurement device of claim 1(see 102 rejection above,) wherein said at least one beam member is secured to said bearing adapter and oriented perpendicular to said load bearing member (beam member is secured to said bearing adapter by the weight of the railcar and load, disclosed in column 2 lines 25-26. Said beam is perpendicular to said load bearing member as is illustrated in picture I. above and fig 1 of the specification.)

12. With respect to claim 5 Stimpson discloses a measurement device of claim 4 (see 102 rejection above,) wherein said load bearing member is a side frame of a truck of the rail car (fig 1.)

13. With respect to claim 6 Stimpson discloses a measurement device of claim 4 (see 102 rejection above,) wherein said at least one beam member is secured to said bearing adapter at both said first end and said second end to establish a fixed end condition at both ends (the ends are secured by the nature of the weight loaded on the beam, column 2 lines 25-26.)

14. With respect to claim 8 Stimpson discloses a measurement device of claim 1 (see 102 rejection above,) wherein said at least one beam member further includes a load bearing section on a top surface of said midsection, the load bearing member contacting said load bearing section to exert the load thereon (fig 2 and column 4 lines 46-49.)

15. With respect to claim 9 Stimpson discloses a measurement device of claim 1 (see 102 rejection above,) wherein said sensor is at least one strain gauge (column 4 lines 52-55 and see picture II. above.)

16. With respect to claim 11 Stimpson discloses a measurement device of claim 9 (see 102 rejection above,) wherein said at least one strain gauge is a plurality of strain gauges (column 4 lines 52-55.)

17. With respect to claim 19 Stimpson discloses a method for measuring vertical load at least partially supported by an axle of a railcar having a load bearing member and an axle bearing housing, said method comprising the steps of (column 4 lines 14-26 disclose attaching the disclosed structure to an existing railcar): mounting a bearing adapter between the load bearing member of the railcar and the axle bearing housing of the railcar (see picture I. above;) providing at least one beam member having a first end, a second end, and a midsection extending between said first end and said second end (see picture II. and III. provided above;) securing at least one of said first end and second end, and a midsection extending between said first end and said second end (the ends are secured by the of the weight loaded on the beam, column 2 lines 25-26;) supporting the load applied by the load bearing member of the railcar with said

midsection of said at least one beam member, said midsection of said at least one beam member being deflected in response to the supported load (column 4 lines 46-49); and measuring the deflection of said midsection of said at least one beam member (column 2 lines 36-42.)

18. With respect to claim 20 Stimpson discloses the method of claim 19 (see 102 rejection above,) further including the step of converting said measured deflection into a load exerted by the load bearing member (column 4 lines 27-32.)

19. With respect to claim 21 Stimpson discloses the method of the method of claim 19 (see 102 rejection above,) wherein said step of measuring the deflection of said midsection includes the step of measuring strain in said midsection of said at least one beam member (column 4 lines 52-55.)

20. With respect to claim 22 Stimpson discloses the method of claim 19 (see 102 rejection above,) wherein said bearing adapter includes a substantially semicircular axle receiving portion (see picture I. provided above, bearing adapter is semicircular about the axle), said method further including the step of mounting said bearing adapter so that said axle bearing housing is received in said axle receiving portion (see picture I. provided above and column 4, lines 14-26.)

21. With respect to claim 23 Stimpson discloses the method of claim 19 (see 102 rejection above,) wherein said step of securing at least one of said first and said second end of said at least one beam member to said bearing adapter includes the step of securing both of said first end and said second end to establish a fixed end condition at

each end (see rejection of claim 6 and column 4 lines 13-26 discuss attaching said structure to a railcar.)

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

23. Claims 7 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stimpson (US 6441324.)

24. With respect to claim 7 Stimpson discloses a measurement device of claim 1(see 102 rejection above,) wherein said at least one beam member includes a protrusion at an underside of said midsection (see picture III. provided above.) Stimpson does not disclose that said protrusion limits deflection of said midsection of said beam member. In Stimpson's invention the protrusion on the end parts of the bar are what limit deflection.

At the time of the invention it would have been obvious to one skilled in the art to mount the protrusions at the external ends of Stimpson's bar to the bearing member and the center protrusion to the load bearing member as such a modification is a mere rearrangement of parts.

25. With respect to claim 24 Stimpson discloses the method of claim 19 (see 102 rejection above.) Stimpson does not disclose the step of providing a protrusion at an

underside of said midsection of said at least one beam member which extends toward said bearing adapter to limit deflection of said midsection of said beam member.

At the time of the invention it would have been obvious to one skilled in the art to attach the structure mentioned in claim 24 (see 103 rejection above) to a railcar as taught by Stimpson (column 4 lines 13-26.)

26. Claims 10, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stimpson (US 6441324) in further view of Izumi (US 4836034.)

27. With respect to claim 10 Stimpson discloses a measurement device of claim 9 (see 102 rejection above.) Stimpson does not disclose wherein said at least one strain gauge is secured to said underside of said midsection.

Izumi (US 4836034) discloses a sensor secured to an underside of a midsection midsection.

Izumi and Stimpson are analogous art because they deal with the same problem, namely measuring deformation and displacement of a disc due to vertical load.

At the time of the invention it would have been obvious to one skilled in the art to mount the sensor(s) in Stimpson's disc the way that Izumi mounts his sensor(s.) The reason or motivation for doing so is that it would allow one to mount a different kind of sensor, or allow for easier manufacturing processes.

28. With respect to claim 25 Stimpson discloses the method of claim 19 (see 102 rejection above,) wherein said step of measuring the deflection of said midsection of said at least one beam member is attained by at least one sensor. Stimpson does not disclose that a sensor is secured to an underside of said midsection.

Izumi (US 4836034) discloses a sensor secured to an underside of a midsection midsection.

Izumi and Stimpson are analogous art because they deal with the same problem, namely measuring deformation and displacement of a disc due to vertical load.

At the time of the invention it would have been obvious to one skilled in the art to mount the sensor(s) in Stimpson's disc the way that Izumi mounts his sensor(s.)

The reason or motivation for doing so is that it would allow one to mount a different kind of sensor, or allow for easier manufacturing processes.

29. With respect to claim 26 Stimpson discloses the method of claim 25 in view of Izumi (see 103 rejection above,) wherein said at least one sensor is a plurality of strain gauges (Stimpson, column 4 lines 52-55.)

Allowable Subject Matter

30. Claims 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does not disclose or suggest the claimed "plurality of beam members, the beam members parallel to each other, and attached to the bearing adapter" in combination with the remaining claim elements as set forth in claims 12-15.

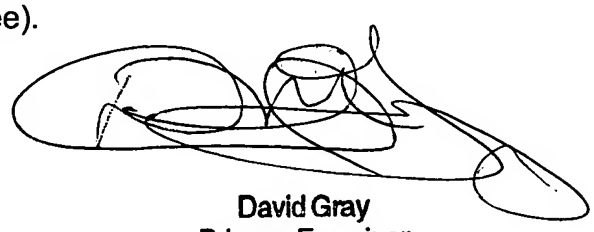
31. Claims 16-18 are allowed. The prior art does not disclose or suggest the claimed "plurality of beam members, the beam members having a first and second end, and being secured to the bearing adapter" in combination with the remaining claim elements as set forth in claims 16-18.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Kayes whose telephone number is (571) 272-8931. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SK
12/02/2005

David Gray
Primary Examiner